

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0878314431](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Shrouded, Lead-free, 44 Circuits, 0.38µm (15µ") Gold (Au) Plating, Center Polarization Slot, with Locking Windows, without PCB Locator, with Open End Wall, Tube

**Documents:**

[3D Model](#) [Product Specification PS-87831-027 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

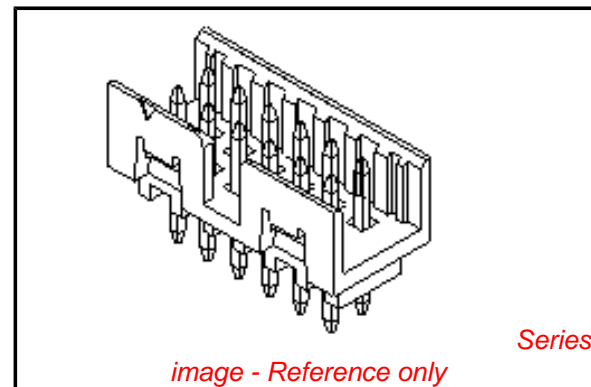
CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87831](#)  
 Application Wire-to-Board  
 Comments Contact Molex for application in automotive industry  
 Overview [milligrid](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 44  
 Circuits (maximum) 44  
 Color - Resin Black  
 First Mate / Last Break No  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part None  
 Lock to Mating Part Yes  
 Material - Metal Brass  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 2  
 Orientation Vertical  
 PC Tail Length (in) 0.098 In  
 PC Tail Length (mm) 2.50 mm  
 PCB Locator No  
 PCB Retention None  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Tube  
 Pitch - Mating Interface (in) 0.079 In  
 Pitch - Mating Interface (mm) 2.00 mm  
 Pitch - Term. Interface (in) 0.079 In  
 Pitch - Term. Interface (mm) 2.00 mm  
 Plating min: Mating (µin) 15  
 Plating min: Mating (µm) 0.38  
 Plating min: Termination (µin) 76  
 Plating min: Termination (µm) 1.88  
 Polarized to Mating Part Center Slot



**EU RoHS**

**ELV and RoHS  
 Compliant**

**REACH SVHC**

**Contains SVHC: No**

**Halogen-Free**

**Status**

**Not Reviewed**

**China RoHS**



**Need more information on product  
 environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[87831Series](#)

**Mates With**

[50394](#) Wire-to-Board Terminals. [51110](#) Wire-to-Board Crimp Housing. [87568](#) Wire-to-Board IDT Housings. [79107](#) Board-to-Board Top Entry Through Hole Receptacle. [79108](#) Board-to-Board FFC/FPC Top Entry Through Hole Receptacle. L

Polarized to PCB	No
Shrouded	Open Ends
Stackable	No
Surface Mount Compatible (SMC)	Yes
Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Through Hole

**Electrical**

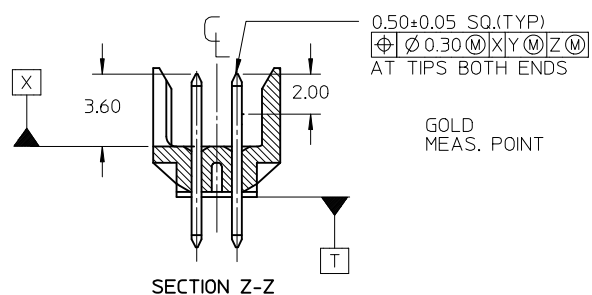
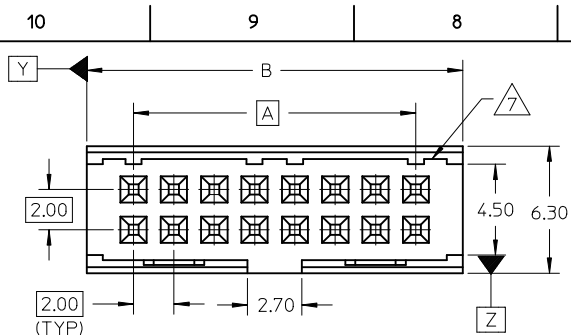
Current - Maximum per Contact	2A
Voltage - Maximum	125V

**Material Info****Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87831-014

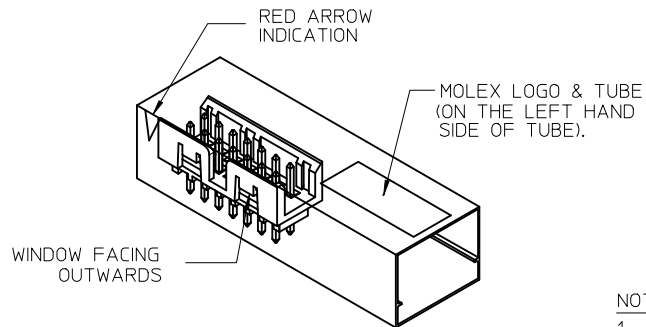
This document was generated on 05/25/2010

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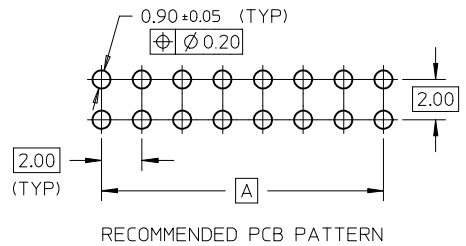
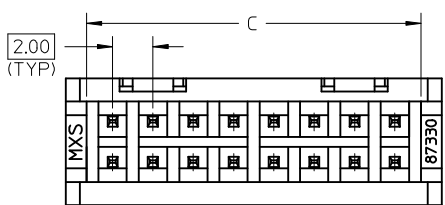
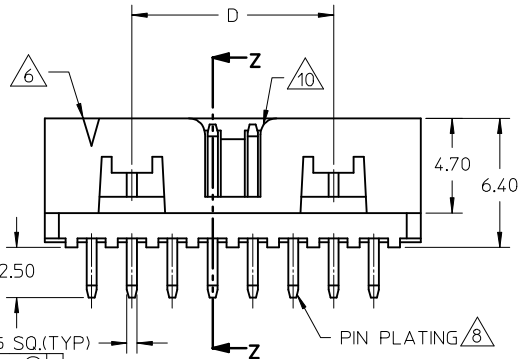


P/N IN TUBE	CKT SIZE	DIMENSION			
		A	B	C	D
87831-0431	04	2.00	6.65	4.60	-
87831-0631	06	4.00	8.65	6.60	-
87831-0831	08	6.00	10.65	8.60	-
87831-1031	10	8.00	12.65	10.60	-
87831-1231	12	10.00	14.65	12.60	-
87831-1431	14	12.00	16.65	14.60	8.00
87831-1631	16	14.00	18.65	16.60	10.00
87831-1831	18	16.00	20.65	18.60	12.00
87831-2031	20	18.00	22.65	20.60	14.00
87831-2231	22	20.00	24.65	22.60	16.00
87831-2431	24	22.00	26.65	24.60	18.00
87831-2631	26	24.00	28.65	26.60	20.00
87831-2831	28	26.00	30.65	28.60	22.00
87831-3031	30	28.00	32.65	30.60	24.00
87831-3231	32	30.00	34.65	32.60	26.00
87831-3431	34	32.00	36.65	34.60	28.00
87831-3631	36	34.00	38.65	36.60	30.00
87831-3831	38	36.00	40.65	38.60	32.00
87831-4031	40	38.00	42.65	40.60	34.00
87831-4231	42	40.00	44.65	42.60	36.00
87831-4431	44	42.00	46.65	44.60	38.00
87831-4631	46	44.00	48.65	46.60	40.00
87831-4831	48	46.00	50.65	48.60	42.00
87831-5031	50	48.00	52.65	50.60	44.00

- NOTES:
- FOR ILLUSTRATION PURPOSES, 16 CIRCUIT SIZE WAFER IS SHOWN.
  - MATERIAL : HOUSING : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
  - PIN PUSHOUT FORCE : 0.91 KG MIN. IN EITHER DIRECTION.
  - PRODUCT SPECIFICATION PS-87831-027 APPLIES.
  - NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
  - △6 CKT 4 & 6 HAS NO IDENTIFICATION TAG.
  - △7 RIBS LOCATION VARIES DEPENDING ON CKT SIZES.
  - △8 PLATING : 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
  - THIS HEADER MATES WITH MOLEX :
    - CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
    - 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
  - NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 & 6.
  - PARTS TO BE PACKED IN TUBE WITH MOISUTRE BARRIER BAG.



REF : ORIENTATION OF PART IN TUBE  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY)



REMOVE TUBE P/N EC NO: S2009-0749 DRWN:YMCHEONG 2009/04/30 CHKD:ATSEE 2009/04/30 APPR:MLONG 2009/05/04	QUALITY SYMBOLS ▽=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		mm	INCH	DRAWN BY ATSEE	DATE 2003/10/06	TITLE MGRID, SHROUDED HEADER VERTICAL W/OPEN END WALL		
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	CHECKED BY KCLING	DATE 2003/11/07	MOLEX MOLEX INCORPORATED		
		2 PLACES ± 0.2 ± ---	1 PLACE ± --- ± ---	APPROVED BY SKTOH	DATE 2003/11/07	DOCUMENT NO. SD-87831-014	SHEET NO. 1 OF 1	
A5	REV	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			